NASA'S MISSION TO PLANET EARTH
EARTH PROBES
DATA INFORMATION SYSTEM
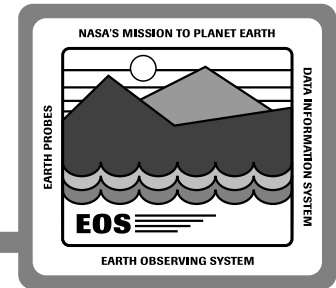EOS
EARTH OBSERVING SYSTEM

ECS Introduction
Marsh Caplan

13 - 14 December 1993

Hughes ECS Team Vision

To earn a reputation for aggressively incorporating innovative technological developments to ensure user satisfaction

To eliminate any "not invented here" attitudes

To involve the user in the definition and early evaluation of our products, services and systems in order to ensure operational satisfaction

To build a multi-contractor organization that is quick to adapt to change

To provide an environment that is conducive to personal and team growth as well as rewarding to our staff

To satisfy the needs of broad and diverse user community through our contractual programmatic requirements and objectives.

What We Heard At SRR
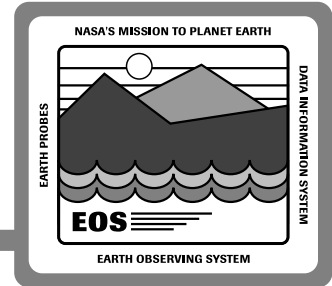
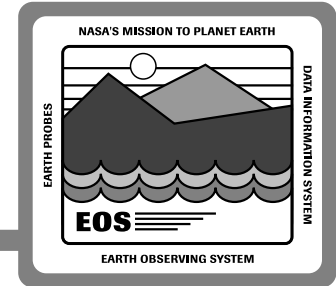Need broader science community involvement

Need to expand and incorporate evolutionary concepts

Need to include external prototyping and/or alternative approaches

Current requirements have preconceived/embedded design

Design is too centralized
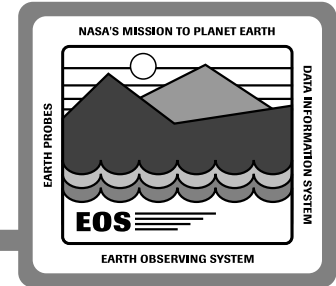
What We Set Out To Accomplish

Rapidly refocus our efforts and enhance our scientific resources

Visit many science community installations and "hear the voice of the user"

Establish cooperative technology activities

Develop a program plan that allows for dynamic balance of user priorities

What We Believe We Have Accomplished At This Point

Identification of innovative architectural concepts and "vision"

Identification of architectural trades including evaluation criteria and increased emphasis on evolution

Development of a "closed loop" working level process

- Joint visits and debriefs (Science Office and other technical organizations)

- Feedback of what we believe we heard

- Weekly coordination meetings with ESDIS ETM's and Project Scientist

- Instantiations of architectural issues working backwards from the "vision"

Establishment of a multiple track development/integration process

Risk Balance
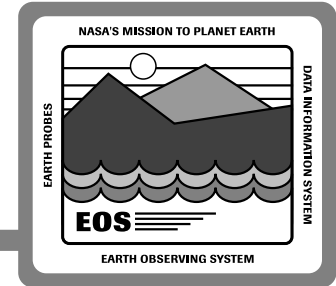
**Prototype efforts typically concentrate on user satisfaction**

Successful development programs (development of large operational systems) have historically balanced user satisfaction with programmatic objectives

- **At SRR we were viewed as being too conservative and placing too much emphasis on programmatics**

- **Since SRR we have refocused our priorities on user satisfaction**

    - **To "step out of the box"**

    - **To be creative/innovative and not discard ideas based upon programmatic constraints**

    - **To work towards the long term architectural vision**

    - **But, in doing such, did not want audience to think we were naive about the realization of programmatic issues**

Risk Balance
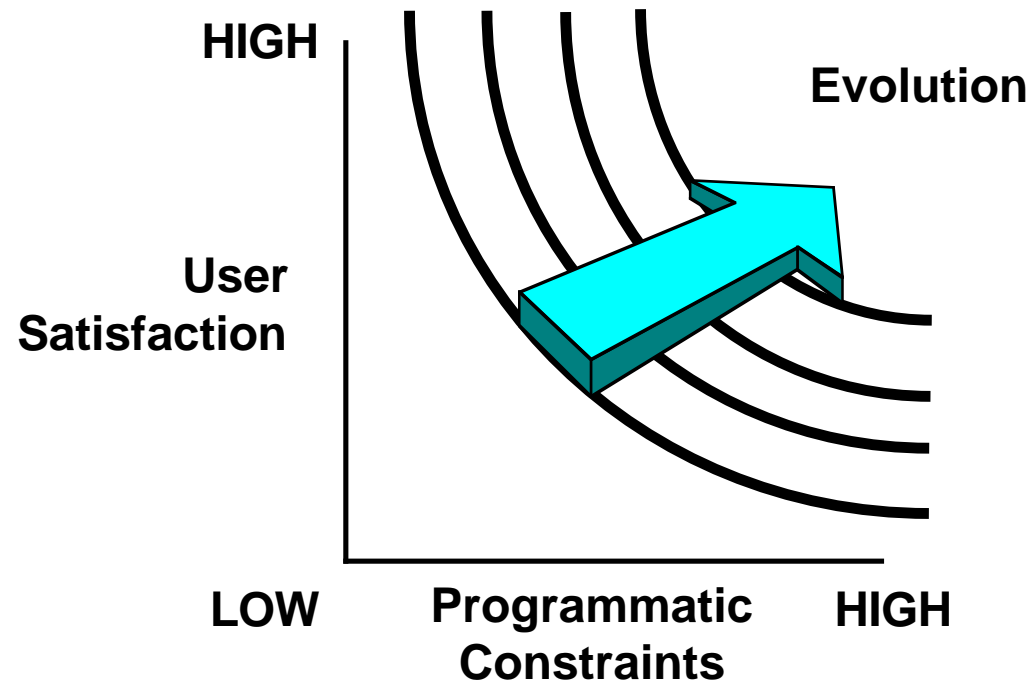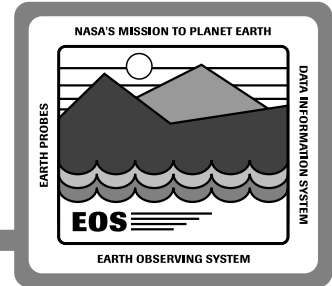
Where We Go From Here
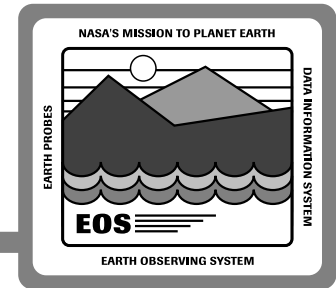
Validation of architectural concepts
(via user feedback, evolutionary tests)

Proof of concepts through development of
system design

Alignment of system design with cost and
schedule (mission) constraints